

WHAT IS CLAIMED IS:

1. An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into

5 a flattened bag shape from flexible material;

a case housing the ink pack and constituting an outer shell of the cartridge; and

10 a contact prevention member which is provided within the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage.

15 2. The ink cartridge according to claim 1, wherein the case is hermetically formed, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus.

3. The ink cartridge according to claim 1, wherein the contact prevention member is formed from genuine material.

20 4. The ink cartridge according to any one of claims 1 through 3, wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a vertical direction, and the contact prevention member is located at least partially in a lower position with respect to a direction of gravity.

25 5. The ink cartridge according to claim 4, wherein the contact

prevention member is formed by a single rod member.

6. The ink cartridge according to claim 5, wherein the contact prevention member formed by the single rod member is fixed on one interior surface of flexible material constituting the ink pack, by heat welding.

7. The ink cartridge according to claim 4, wherein the contact prevention member is formed by a single rod member bent into a substantially rectangular shape, and arranged the rod along four sides of the flattened ink pack.

10 8. An ink cartridge for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

15 a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially vertical state, and

20 wherein an ink flow passages bulging outwardly of the ink pack is formed on at least one of interior surfaces of flexible material constituting the ink pack to extend along a gravity direction lower side of the ink pack.

25 9. The ink cartridge according to claim 8, wherein the ink flow passage is formed by press-forming flexible material constituting the ink pack.

10. The ink cartridge according to claim 8, wherein an end of the ink flow passage is elongated so as to reach a vicinity of an ink outlet port.

11. The ink cartridge according to any one of claims 8 through 5 10, wherein the case is formed hermetically, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus.

12. An ink cartridge for use with a recording apparatus, 10 comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

a case housing the ink pack and constituting an outer shell of the cartridge;

15 wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially horizontal state, and

wherein ink flow passages bulging outwardly of the ink pack are formed on at least one of interior surfaces of flexible material 20 constituting the ink pack to extend along respective sides of the ink pack perpendicular to a side in which an ink outlet port is formed.

13. The ink cartridge according to claim 12, wherein the ink flow passages are formed by press-forming flexible material 25 constituting the ink pack.

14. The ink cartridge according to claim 12, wherein an ink outlet port side end of each ink flow passage is extended to reach a vicinity of the ink outlet port.

15. The ink cartridge according to any one of claims 12 5 through 14, wherein the case is formed hermetically, and air pressure can be applied from a recording apparatus to an interior of the case to pressurize the ink pack when the ink cartridge is loaded to the recording apparatus.

16. A flexible ink pack having opposing interior surfaces 10 defining a substantially rectangular ink storage chamber, the flexible ink pack comprising:

a plug member provided to a shorter side of the substantially rectangular ink storage chamber; and

15 a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack, and elongated substantially along a longer side of the substantially rectangular ink storage chamber.

17. The flexible ink pack according to claim 16, wherein the protrusion includes a rod member attached to the one interior 20 surface.

18. The flexible ink pack according to claim 16, wherein the recess is formed as a consequence of plastically deforming a part of a flexible film defining the one interior surface.

19. The flexible ink pack according to claim 16, wherein 25 the protrusion is elongated linearly along the longer side.

20. The flexible ink pack according to claim 16, wherein the recess is elongated linearly along the longer side.

21. The flexible ink pack according to claim 16, wherein the protrusion is substantially rectangular.

5 22. The flexible ink pack according to claim 16, wherein the recess is substantially U-shaped.

23. The flexible ink pack according to claim 16, wherein the protrusion has an inclined portion angled with respect to both the shorter and longer sides.

10 24. The flexible ink pack according to claim 16, wherein the recess has an inclined portion angled with respect to both the shorter and longer sides.